

September 28 - October 3, 2001

The Terra spacecraft is in nominal mode. All instruments are in nominal science mode.

Instrument operations are continuing smoothly on all five instruments. Field campaigns are ongoing, and a calibration roll maneuver for MODIS is planned for October 7.

Subsequent to the event on September 19 that resulted in a lost Tracking and Data Relay Satellite System (TDRSS) contact, the behavior of the communications subsystem appears nominal, although several spikes in the S-band Transponders (identical to those observed in the past) have been observed. The first meeting on the S-band Transponder (SBT) issues was held on October 3. The spacecraft development contractor and the transponder vendor will support the investigation. The discussion focused on methods of determining the cause(s) of the telemetry spikes that have been observed, and determining what prevented the transponder from turning on during one scheduled TDRSS event on September 19. One consideration is that the spikes may be resulting from software resets occurring on the transponders. Landsat 7 has the same transponder, and resets occur when the transponder does not receive a signal for 10 minutes.

Several action items resulted from the meeting including a plan to conduct a thorough review of all mission data to compile a full history of the resets on Terra, and to obtain more information from Landsat 7 about their resets. The vendor is investigating transponder states that might cause a drop in transmitter current.

A Drag Make-up Maneuver was successfully executed on October 3. The next one is predicted to be required in about 2 weeks.

Ground testing with the commercial ground terminals at Svalbaard (SKS) and Alaska (PF1) is continuing.

Several MDA2BITE trips (High Gain Antenna Motor Drive Assembly opto-coupler single event upsets) occurred during this reporting period with no resultant non-recoverable data loss.

Plans:

- <ul>
- <li>Next MODIS Calibration Roll Maneuver on October 7
- <li>Review of contingency scenarios for Leonids Meteor Shower
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